SILICON
CONSULTING ENGINEERS

SC/QC/EYNK/2023-24/PMC

Date: 12-04-2023

To,
The Executive Engineer,(ELE)
Yelahanka Division,
Bangalore.

"FREQUENCY AND QUALITY REPORT"

Dear Sir,

Subject: Regarding Quality Report for the below mentioned work.

Name of Work: Providing Street Lights in Yelahanka Division Ward No 03 & 02.

Item No	Description of work	Unit	Qty	No of Samples Tested	Standards
2	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates	Cum	5.81	2	Per 100 cum
3	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications.(V-III, I.No 13.1 Page No 99, PWD SR 2021-22)	Tonne	3.53	2	Per Dia
4	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works	Cum	74.20	10	Per 50 cum
5	Providing and Fixing Pre cast covering Slab 100mm thick made out of CC, jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll	Sqm	154.35	1	Per 500 Sqm
6	Providing and fixing pre cast solid cement concrete kerb stones made out of CC M20 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in	Nos	2027.00	4	Per 500 Nos

With respect to the above subject & name of the work, we have inspected the work and the Quantity and Quality of above mentioned items of the work was found to be completed satisfactorily for the 1st and Final bill

Thanking you,

With Regards,

For Silicon Consulting Engineers

SILICON CONSULTING ENGINEERS

A/S

#S1317, 4th CROSS BEL 2nd STAGE BHARATH NAGAR ,BANGALORE – 560 091. CELL : 9448353883
E-mail siliconcivilengineers@gmail.com

SILICON
CONSULTING ENGINEERS

SC/QC/EYNK/2023-24/PMC

Date: 12-04-2023

To,
The Executive Engineer,(ELE)
Yelahanka Division,
Bangalore.

"PMC CERTIFICATE AND INSPECTION REPORT"

Dear Sir,

Subject: Regarding Inspection Report for the below mentioned work.

NAME OF WORK:- Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02

Item No	Description of work	Unit	Qty	Remarks
1	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar	Cum	71.08	Work done upto the Billed Quantity and the Quality is Satisfactory
2	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates	Cum	5.81	Work done upto the Billed Quantity and the Quality is Satisfactory
3	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure compiete as per Drawing and Technical Specifications.(V-III, I.No 13.1	Tonne	3.53	Work done upto the Billed Quantity and the Quality is Satisfactory
4	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works &	Cum	74.20	Work done upto the Billed Quantity and the Quality is Satisfactory
5	Providing and Fixing Pre cast covering Slab 100mm thick made out of CC, jelly 20mm Down size with steel reinforcement including form work,curing,including	Sqm	154.35	Work done upto the Billed Quantity and the Quality is Satisfactory
6	Providing and fixing pre cast solid cement concrete kerb stones made out of CC M20 with top and bottom width 114 and 165 mm respectively, 400mm high and	Nos	2027.00	Work done upto the Billed Quantity and the Quality is Satisfactory
7	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti	Nos	960.00	Work done upto the Billed Quantity and the Quality is Satisfactory
8	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti	Nos	208.00	Work done upto the Billed Quantity and the Quality is Satisfactory
9	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti	Nos	190.00	Work done upto the Billed Quantity and the Quality is Satisfactory

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Item No	Description of work	Unit	Qty	Remarks
10	Supply of LED floodlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti	Nos	154.00	Work done upto the Billed Quantity and the Quality is Satisfactory
11	Supply of LED pole mounting type post top lantern with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment	Nos	50.00	Work done upto the Billed Quantity and the Quality is Satisfactory
12	Supplying and Fixing of.....mm dia class A GI pipe bracket upto 2 ms long bent at suitable angle and fixing to this bracket 1x40/2x40 W fluorescent tube street	Each	1060.00	Work done upto the Billed Quantity and the Quality is Satisfactory
13	Fabricating, supplying and erection of ...Mtrs long hot dip Galvanized Conical pole with BSEN 10025 grade S355JO steel plate for shaft, IS 2062 for base	Each	13.00	Work done upto the Billed Quantity and the Quality is Satisfactory
14	Supplying of 1.1 kV, XLPE or Heat resistant PVC insulated, PVC exutruted Inner Seath Armoured LTUG Cable as per IS-1554 (Part1) or IS-7098 Part-1,	Km	5.77	Work done upto the Billed Quantity and the Quality is Satisfactory
15	Supplying of 1.1 kV, XLPE or Heat resistant PVC insulated, PVC exutruted Inner Seath Armoured LTUG Cable as per IS-1554 (Part1) or IS-7098 Part-1,	Km	1.64	Work done upto the Billed Quantity and the Quality is Satisfactory
16	Supplying of 1.1 kV, XLPE or Heat resistant PVC insulated, PVC exutruted Inner Seath Armoured LTUG Cable as per IS-1554 (Part1) or IS-7098 Part-1,	Km	0.50	Work done upto the Billed Quantity and the Quality is Satisfactory
17	Laying of cable in Existing Trench/GI pipe/Stone Ware/RCC Hume pipe using Wooden/Aluminum Rollers as directed by the departmental staff 2.5 to 25 Sqmm	Km	7.41	Work done upto the Billed Quantity and the Quality is Satisfactory
18	Laying of cable in Existing Trench/GI pipe/Stone Ware/RCC Hume pipe using Wooden/Aluminum Rollers as directed by the departmental staff 35 to 95 Sqmm	Km	0.50	Work done upto the Billed Quantity and the Quality is Satisfactory
19	Earth work excavation for cable trench of 0.4 to 0.6 Mtr. Width and Depth upto 1 Mtr including trial pits, depositing on bank upto a lead of 50 Mtr, Supplying	Cum	866.88	Work done upto the Billed Quantity and the Quality is Satisfactory
20	Refilling the cable trenches with selected available earth from trench excavation including watering, consolidation in layers of 15 cm. Thickness including	Cum	866.88	Work done upto the Billed Quantity and the Quality is Satisfactory
21	Supplying and drawing Flexible Multicore Cable manufactured with electrolytic grade flexible copper with low conductor confirming to IS:8130-	Mtr	2484.00	Work done upto the Billed Quantity and the Quality is Satisfactory
22	GI Pipe B - Class as per IS-1239 GI Pipe - 40 mm Dia	Mtr	50.00	Work done upto the Billed Quantity and the Quality is Satisfactory
23	Supplying of Epoxy Terminating Kit (Pothead) suitable for 1.1 kV, LTUG Cable Up to 4C x 50 Sqmm	Nos	10.00	Work done upto the Billed Quantity and the Quality is Satisfactory

A/s

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು (ವಿದ್ಯುತ್)
ಬೆ.ಗ್ರಾ.ಜಿ.ಪಂ. ಬೆಂಗಳೂರು

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Item No	Description of work	Unit	Qty	Remarks
24	Supplying Heavy Duty Copper Terminal Long Barrel.25 Sqmm Copper Terminal, Apprx Wt: 11 Gm	Nos	1448.00	Work done upto the Billed Quantity and the Quality is Satisfactory
25	Rod type of earthing using 40 mm Dia, 3 Mtr long MS rod as ground rod, in earth pit of 300 mm width and 3300 mm depth and using 50x6 mm flat welded to	Nos	10.00	Work done upto the Billed Quantity and the Quality is Satisfactory
26	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc.,and painted with 2 coats of red oxide and	Mtrs	80.00	Work done upto the Billed Quantity and the Quality is Satisfactory
27	Fabricating supplying and mounting MS box made out SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation,	Sqmm	350000.00	Work done upto the Billed Quantity and the Quality is Satisfactory
28	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts, necessary phase	Nos	10.00	Work done upto the Billed Quantity and the Quality is Satisfactory
29	Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires.	Nos	1512.00	Work done upto the Billed Quantity and the Quality is Satisfactory
30	Fixing charges of post top/ Gate/ Garden fitting /LED on the existing CI / GI or any other pipe using required size of reducer, wiring using suitable wires.	Nos	50.00	Work done upto the Billed Quantity and the Quality is Satisfactory
31	Supplying & fixing of retrofit type - LED bulb.....W with OPAL acrylic diffuser comprising of LED source with CCT 6500 degree K, CRI> 70%. efficacy >80 lumen per	Nos	31.00	Work done upto the Billed Quantity and the Quality is Satisfactory
32	Supplying Spiral Earth Electrode	Each	132.00	Work done upto the Billed Quantity and the Quality is Satisfactory
33	Dismanting of Steel/I- Beam/Tubular poles (90% of the Pole erection charges.p2/2.01 Rs 688.00x90%=619.2)	Each	50.00	Work done upto the Billed Quantity and the Quality is Satisfactory
34	Releasing of existing LEd street light(Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts,	Each	190.00	Work done upto the Billed Quantity and the Quality is Satisfactory
35	Mobile Hydraulic Crane 35 t capacity for releasing and refixing of High Mast	hour	150.00	Work done upto the Billed Quantity and the Quality is Satisfactory
36	Centralized Control & Monitoring Sysem (CCMS) for Streetlights consisting of: Supply and erection of Thyristor based single phase smart streetlight control	Nos	10.00	Work done upto the Billed Quantity and the Quality is Satisfactory
37	Supply and errection of Single phase 63 Amps Thyristor based Streetlight control system consisting of: micro controller based electronic Timer with RTC, 2x16 LCD	Nos	50.00	Work done upto the Billed Quantity and the Quality is Satisfactory

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Item No	Description of work	Unit	Qty	Remarks
38	Supply of 3 Mtr Powder Coated Mild Steel Pole powering 40W PCB Light and 20w strip. Dimension of pole 3mm thickness with 80x120mm having Body	Nos	21.00	Work done upto the Billed Quantity and the Quality is Satisfactory
39	Supply of 3 Mtr Powder Coated Mild Steel Pole with 3mm thickness having top Triangle shape with light 36w and arm light 24w Body Colour Grey/Black . 3mtr	Nos	30.00	Work done upto the Billed Quantity and the Quality is Satisfactory
40	Supply of 3 Mtr Powder Coated Mild Steel Pole with 3mm thickness having top Triangle shape, Arm will have 600mm length at one side PCB will be palced with	Nos	27.00	Work done upto the Billed Quantity and the Quality is Satisfactory
41	Supply of Pressure die Cast body housing , Half Moon shaped landscape Light Dia 450mm,Height 450mm, and mounting dia OD 60mm.LED Light having 60w	Nos	100.00	Work done upto the Billed Quantity and the Quality is Satisfactory
42	Fabricating, Supplying and errection of decorative bent type Tuskar Conical Street light pole with hot dip Galvanized with BSEN 10025 grade S 355 JO Steel plate	Nos	31.00	Work done upto the Billed Quantity and the Quality is Satisfactory
43	Fabricating, Supplying and errection of decorative Zig-Zag bent type Street light pole with hot dip Galvanized with BSEN 10025 grade S 355 JO Steel plate for shaft, IS	Nos	68.00	Work done upto the Billed Quantity and the Quality is Satisfactory
44	Fabricating, Supplying and errection of decorative double arm bent type Swirl Street light pole, with 3 sections MS shaft, IS 2062 for base plate with door	Nos	33.00	Work done upto the Billed Quantity and the Quality is Satisfactory
45	Supply, installation, testing and commissioning of out door garden speaker fitted with wide response and water resistant polypropylene speaker components	Nos	13.00	Work done upto the Billed Quantity and the Quality is Satisfactory
46	Supply, installation, testing and commissioning of 480 to 600 watt amplifier with large air cooled/forced air cooled heat sink with 3 x line level inputs and 1 x 100	Nos	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
47	Supply, installation, testing and commissioning of FM radio with Frequency range of 70 Mhz to 108 Mhz PLL based auto tuning sysetm with aux out with out door	Nos	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
48	Supply, installation, testing and commissioning of water proof audio rack made of Powder coated MS lockable with bottem ventilated with removable mesh	Nos	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
49	Supply, installation, testing and commissioning of hand held wired mic with wind shield with single channel mic preamp Frequency response of 55 htz to	Nos	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
50	Supplying and laying of copper 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable Armouring strip	Mtr	300.00	Work done upto the Billed Quantity and the Quality is Satisfactory
51	Fabricating, Supplying and errection of Garden speaker protective enclsoure of size H 91.55mmxL30.50mmxB30.50mm fabricated out of MS	Nos	114.00	Work done upto the Billed Quantity and the Quality is Satisfactory

Item No	Description of work	Unit	Qty	Remarks
52	Laying of UG Cables by trenchless technology by adopting horizontal boring & Drawing of cable including preparation at site With HDPE Pipe i) Normal	Mtr	454.00	Work done upto the Billed Quantity and the Quality is Satisfactory
E1	Supply and instalations of IP66, 60 watts LED Solar street light with 5 Mtrs long MS pole as detailed specfication Housing ABS Anti-UV Plastic Housing with	Nos	44.00	Work done upto the Billed Quantity and the Quality is Satisfactory
E2	Supply and erection of 3 Mtr long Aluminium Pole with 60 watt LED Light made out of extruded alluminium 75x150mm with 3 MM thickness, with same dimention	Nos	5.00	Work done upto the Billed Quantity and the Quality is Satisfactory
E3	Supply and erection of 3 Mtr long Aluminium decorative Pole with 60 watt LED Light made out of single piece extruded alluminium 75x150mm with 3	Nos	5.00	Work done upto the Billed Quantity and the Quality is Satisfactory

With respect to the above subject & name of the work, we have inspected the work and the Quantity and Quality of above mentioned items of the work was found to be completed satisfactorily for the 1st and Final bill

Thanking you,

With Regards,

SILICON CONSULTING ENGINEERS

For Silicon Consulting Engineers

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QC/AMG-YELI/2022-23/W32/C1 Date: 01-12-2022

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}
Ref.: Material testing/PMC/22-23,
Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

PHYSICAL TESTS ON CEMENT

Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	**171 min**	Shall not be less than 30 min
2	Final setting time	**292 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**1.76 %**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**2.03 mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results)	**28.59 N/Sq mm**	Shall not be less than 27 N/Sqmm

The result of the materials tested meets the standards and hence can be used for the work.
For Pole Pedestral : Doddaballapur Main Road

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

QC/AMG-YELI/2022-23/W32/PCC1 Date: 01-12-2022

1. TESTING OF COARSE AND FINE AGGREGATES:

Sub: Testing of Coarse and Fine aggregates to be used for bed concrete.

{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}

Ref.: Material testing/PMC/22-23,

Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

1. COARSE AGGRGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing	
	40 mm Sample	Single size	Graded
40mm	**100.00**	85-100	90 – 100
20mm	**66.70**	0 -20	30- 70
10mm	**32.90**	0 -5	10- 35
4.75mm	**3.60**	------	0- 5

2. FINE AGGREGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	**98.80**	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	**85.20**	60-95	75-100	85-100	
01.18	**69.50**	30-70	55-90	75-100	
600.mic	**54.10**	15-34	35-59	60-79	
300.mic	**17.80**	5-20	8-30	12-40	
150.mic	**9.40**	0-10	0-10	0-10	

The result of the materials tested meets the standards and hence can be used for the work.

For Pole Pedestral : Doddaballapur Main Road

AE

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

SILICON CONSULTING ENGINEERS

QC/AMG-YELI/2022-23/W32/PCC2 **Date: 06-12-2022**

1. TESTING OF COARSE AND FINE AGGREGATES:

Sub: Testing of Coarse and Fine aggregates to be used for bed concrete.

{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}

Ref.: Material testing/PMC/22-23,

Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

1. COARSE AGGRGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing	
	40 mm Sample	Single size	Graded
40mm	**100.00**	85-100	90 – 100
20mm	**60.70**	0 -20	30- 70
10mm	**28.10**	0 -5	10- 35
4.75mm	**3.40**	------	0- 5

2. FINE AGGREGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	**95.80**	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	**82.60**	60-95	75-100	85-100	
01.18	**69.10**	30-70	55-90	75-100	
600.mic	**38.40**	15-34	35-59	60-79	
300.mic	**22.90**	5-20	8-30	12-40	
150.mic	**9.20**	0-10	0-10	0-10	

The result of the materials tested meets the standards and hence can be used for the work.

For Pole Pedestral : Attur Lake Double Road

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 02

SILICON CONSULTING ENGINEERS

QC/AMG-YELI/2022-23/W32/CE1 Date: 08-12-2022

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}
Ref.: Material testing/PMC/22-23,
Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

PHYSICAL TESTS ON CEMENT

Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	**180 min**	Shall not be less than 30 min
2	Final setting time	**267 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**1.94 %**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**2.43 mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results)	**28.17 N/Sq mm**	Shall not be less than 27 N/Sqmm

The result of the materials tested meets the standards and hence can be used for the work.
For Pole Pedestral : Yelahanka Lake Beside Road

SILICON CONSULTING ENGINEERS

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

QC/AMG-YELI/2022-23/W32/FA1 **Date: 08-12-2022**

1. TESTING OF FINE AGGREGATES :

Sub: Testing of Fine Aggregates.

{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}

Ref.: Material testing/PMC/22-23,

Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size,mm	**Percentage Passing**	Specification as Per IS: 383-1970(Reaffirmed 2002) **Percentage Passing**			Remarks
		Zone-I	**Zone-II**	**Zone -II**	
04.75	**97.20**	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	**84.00**	60-95	75-100	85-100	
01.18	**71.60**	30-70	55-90	75-100	
600. mic	**55.90**	15.34	35-59	60-79	
300.mic	**24.70**	5-20	8-30	12-40	
150.mic	**6.50**	0-10	0-10	0-10	

TABLE 1.2 ;

Sl No	**Test Conducted**	**Sample**	**Results**	**Requirements** as Per IS. Specification IS :383-1970 (Reaffirmed 2002)
1	Bulking of Sand	001	**19.28 %**	-----
2	Silt Content	----	**0.65 %**	Not more than 8%
3	Specific Gravity	----	**2.61**	-------

The result of the materials tested meets the standards and hence can be used for the work.

For Pole Pedestral : Yelahanka Lake Beside Road

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

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QC/AMG-YELI/2022-23/W32/CA1 **Date: 08-12-2022**

1. TESTING OF COARSE AGGREGATES (20 mm):

Sub: Testing of Construction Materials.

{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}

Ref.: Material testing/PMC/22-23,

Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

Table - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing	
	20 mm Sample	Single size	Graded
40 mm	**100.00**	100.00	100.00
20 mm	**97.50**	85-100	90 - 100
10 mm	**51.90**	0 - 20	25 - 55
4.75 mm	**8.60**	0 - 5	0 - 10

TABLE 1. 2 :

SL No	Test conducted	Results	**Requirements** as per IS:383-1970 & Tests Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2002)
1.	Flakiness Index	**23.55 %**	Not to exceed 25 %
2.	Crushing value	**30.89 %**	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

The result of the materials tested meets the standards and hence can be used for the work.

For Pole Pedestral : Yelahanka Lake Beside Road

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

SILICON CONSULTING ENGINEERS

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QC/AMG-YELI/2022-23/W32/S1 **Date: 08-12-2022**

1. TEST REPORT ON REINFORCEMENT STEEL:

Sub: Testing of Reinforcement Steel of diameter 10 and 12 mm **TMT Steel.**

{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}

Ref.: Material testing/PMC/22-23,

Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

TABLE – 1

SL No	Details	For 10 mm		For 12 mm	
		Test Results	Min Req. as per IS 1786-2008	**Test Results**	Min Req. as per IS 1786-2008
01	Observed diameter of bar	**10.0 mm**	10.0 mm	**12.0 mm**	10.0 mm
02	Observed Wt/m Length **Kg/m**	**0.622**	0.567	**0.895**	0.854
03	Proof stress/Yield stress, fy , **N/mm^2**	**536.0**	500.0	**541.0**	500.0
04	Bend/ Re bend Test	**Ok**	---	**Ok**	---
05	Percentage of Elongation, %	**21.70**	12.00	**21.10**	12.00
06	Ultimate Tensile Strength **N/mm^2**	**639.0**	545.0	**653.0**	545.0

The result of the materials tested meets the standards and hence can be used for the work.

For Pole Pedestral : Yelahanka Lake Beside Road

SILICON CONSULTING ENGINEERS

Asst. Executive Engineer
Projects Division
Yelahanka Zone
BBMP, Bangalore - 92

#S1317, 4th CROSS BEL 2nd STAGE BHARATH NAGAR ,BANGALORE – 560 091. CELL : 9448353883
E-mail siliconcivilengineers@gmail.com

QC/AMG-YELI/2022-23/W32/CB1 Date: 19-12-2022

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).

{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}

Ref.: Material testing/PMC/22-23,

Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	12-12-22	19-12-22	07	22500	335	14.89	**14.96**
	002	"	"	"	"	330	14.67	
	003	"	"	"	"	345	15.33	

The result of the materials tested meets the standards and hence can be used for the work.

For Pole Pedestral : From Indian Petrol Bunk to Vidya Peeta School

SILICON CONSULTING ENGINEERS

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

QC/AMG-YELI/2022-23/W32/CB1A **Date: 09-01-2023**

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).
{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}
Ref.: Material testing/PMC/22-23,
Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	12-12-22	09-01-23	28	22500	490	21.78	**21.48**
	002	"	"	"	"	480	21.33	
	003	"	"	"	"	480	21.33	

The result of the materials tested meets the standards and hence can be used for the work.
For Pole Pedestral : From Indian Petrol Bunk to Vidya Peeta School

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

SILICON CONSULTING ENGINEERS

QC/AMG-YELI/2022-23/W32/CB2 Date: 22-12-2022

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).

{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}

Ref.: Material testing/PMC/22-23,

Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	15-12-22	22-12-22	07	22500	320	14.22	**14.59**
	002	"	"	"	"	335	14.89	
	003	"	"	"	"	330	14.67	

The result of the materials tested meets the standards and hence can be used for the work

For Pole Pedestral : Yelahanka Lake Beside Road

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

QC/AMG-YELI/2022-23/W32/CB2A

Date: 12-01-2023

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).

{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}

Ref.: Material testing/PMC/22-23,

Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	15-12-22	12-01-23	28	22500	480	21.33	**21.11**
	002	"	"	"	"	470	20.89	
	003	"	"	"	"	475	21.11	

The result of the materials tested meets the standards and hence can be used for the work.

For Pole Pedestral : Yelahanka Lake Beside Road

AC

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

QC/AMG-YELI/2022-23/W32/CB3 Date: 27-12-2022

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).
{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}
Ref.: Material testing/PMC/22-23,
Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	20-12-22	27-12-22	07	22500	345	15.33	**15.78**
	002	"	"	"	"	360	16.00	
	003	"	"	"	"	360	16.00	

The result of the materials tested meets the standards and hence can be used for the work.
For Pole Pedestral : Yelahanka Lake Beside Road

SILICON CONSULTING ENGINEERS

Asst. Executive Engineer
Project Division
Yelahanka
BBMP, Bangalore - 22

QC/AMG-YELI/2022-23/W32/CB3A Date: 17-01-2023

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).

{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}

Ref.: Material testing/PMC/22-23,

Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	20-12-22	17-01-23	28	22500	495	22.00	**21.63**
	002	"	"	"	"	480	21.33	
	003	"	"	"	"	485	21.56	

The result of the materials tested meets the standards and hence can be used for the work.

For Pole Pedestral : Yelahanka Lake Beside Road

AE

Asst. Executive Engineer
Project Division
Yelahanka
BBMP, Bangalore - 92

SILICON CONSULTING ENGINEERS

QC/AMG-YELI/2022-23/W32/CB4 Date: 30-12-2022

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).
{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}
Ref.: Material testing/PMC/22-23,
Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	23-12-22	30-12-22	07	22500	365	16.22	**15.70**
	002	"	"	"	"	345	15.33	
	003	"	"	"	"	350	15.56	

The result of the materials tested meets the standards and hence can be used for the work.
For Pole Pedestral : Attur Lake Double Road

SILICON CONSULTING ENGINEERS

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

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QC/AMG-YELI/2022-23/W32/CB4A Date: 20-01-2023

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).
{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}
Ref.: Material testing/PMC/22-23,
Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	23-12-22	20-01-23	28	22500	480	21.33	**20.89**
	002	"	"	"	"	465	20.67	
	003	"	"	"	"	465	20.67	

The result of the materials tested meets the standards and hence can be used for the work.
For Pole Pedestral : Attur Lake Double Road

SILICON CONSULTING ENGINEERS

Asst. Executive Engineer
Yelahanka Division
Yelahanka Zone
BBMP, Bangalore - 92

QC/AMG-YELI/2022-23/W32/CB5 **Date: 04-01-2023**

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).
{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}
Ref.: Material testing/PMC/22-23,
Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	28-12-22	04-01-23	07	22500	335	14.89	**14.30**
	002	"	"	"	"	310	13.78	
	003	"	"	"	"	320	14.22	

The result of the materials tested meets the standards and hence can be used for the work.
For Pole Pedestral : Attur Lake Double Road

SILICON CONSULTING ENGINEERS

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

#S1317, 4th CROSS BEL 2nd STAGE BHARATH NAGAR ,BANGALORE – 560 091. CELL : 9448353883
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QC/AMG-YELI/2022-23/W32/CB5A

Date: 25-01-2023

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).

{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}

Ref.: Material testing/PMC/22-23,

Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	28-12-22	25-01-23	28	22500	470	20.89	**21.41**
	002	"	"	"	"	490	21.78	
	003	"	"	"	"	485	21.56	

The result of the materials tested meets the standards and hence can be used for the work.

For Pole Pedestral : Attur Lake Double Road

AE

SILICON CONSULTING ENGINEERS

Asst. Executive Engineer
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QC/AMG-YELI/2022-23/W32/S1 Date: 31-01-2023

TEST REPORT

Sub: Testing of Pre-cast Material-Precast Slab (100mm thick).
{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}
Ref.: Material testing/PMC/22-23,
Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

1. PHYSICAL TESTS ON PRECAST SLAB:

Sl No	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	90.00	0.413	2337.10	1.80	0.960	35.20	17.93	19.36	18.59	**23.23**
2	50.00	90.00	0.409	2314.47	1.80	0.960	34.95	17.80	19.22	18.45	**23.07**
3	50.00	90.00	0.422	2388.03	1.80	0.960	35.80	18.23	19.69	18.90	**23.63**

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Kempanahalli Road From Attur Road

AC

Asst. Executive Engineer
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BBMP, B[illegible]alore - 92

SILICON CONSULTING ENGINEERS

QC/AMG-YELI/2022-23/W32/K1 Date: 28-01-2023

TEST REPORT

Sub: Testing of Pre-cast Material-Kerb Stones.
{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}
Ref.: Material testing/PMC/22-23,
Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

1. PHYSICAL TESTS ON KERB STONES :

Sl No	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	85.00	0.384	2300.82	1.70	0.960	27.20	13.85	14.96	14.36	**17.95**
2	50.00	85.00	0.391	2342.76	1.70	0.960	28.00	14.26	15.40	14.79	**18.48**
3	50.00	85.00	0.389	2330.78	1.70	0.960	27.40	13.95	15.07	14.47	**18.09**

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Doddaballapura Main Road, From Indian Petrol Bunk

Asst. Executive Engineer
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Yel[illegible]Zone
BBMP, B[illegible]galore - 92

SILICON CONSULTING ENGINEERS

QC/AMG-YELI/2022-23/W32/K2 Date: 04-02-2023

TEST REPORT

Sub: Testing of Pre-cast Material-Kerb Stones.
{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}
Ref.: Material testing/PMC/22-23,
Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

1. PHYSICAL TESTS ON KERB STONES :

Sl No	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	85.00	0.394	2360.74	1.70	0.960	28.60	14.57	15.73	15.10	**18.88**
2	50.00	85.00	0.387	2318.79	1.70	0.960	28.20	14.36	15.51	14.89	**18.61**
3	50.00	85.00	0.392	2348.75	1.70	0.960	28.30	14.41	15.57	14.94	**18.68**

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Doddaballapura Main Road, From Indian Petrol Bunk

Asst. Executive Engineer
Proj... Division
Yela... Zone
BBMP, ...lore - 92

SILICON CONSULTING ENGINEERS

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QC/AMG-YELI/2022-23/W32/K3 Date: 10-02-2023

TEST REPORT

Sub: Testing of Pre-cast Material-Kerb Stones.
{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}
Ref.: Material testing/PMC/22-23,
Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

1. PHYSICAL TESTS ON KERB STONES :

Sl No	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	85.00	0.390	2336.77	1.70	0.960	27.30	13.90	15.02	14.42	**18.02**
2	50.00	85.00	0.381	2282.84	1.70	0.960	26.80	13.65	14.74	14.15	**17.69**
3	50.00	85.00	0.396	2372.72	1.70	0.960	27.00	13.75	14.85	14.26	**17.82**

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Attur Lake Double Road, Kempanahalli Road

AE

Asst. Executive Engineer
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BBMP, Bang... - 92

SILICON CONSULTING ENGINEERS

#S1317, 4th CROSS BEL 2nd STAGE BHARATH NAGAR ,BANGALORE – 560 091. CELL : 9448353883
E-mail siliconcivilengineers@gmail.com

QC/AMG-YELI/2022-23/W32/K4 Date: 13-02-2023

TEST REPORT

Sub: Testing of Pre-cast Material-Kerb Stones.
{Project*: Providing Energy Efficient street lights, Real time Street Light Control switches, Control Wires, poles, ABC cable and other accessories in Ward No 03 & 02.}
Ref.: Material testing/PMC/22-23,
Report Required for: Assistant Executive Engineer,
Yelahanka Electrical Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Suraksha Electricals. Sri. Madhusudhan A N.

1. PHYSICAL TESTS ON KERB STONES :

Sl No	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	85.00	0.396	2372.72	1.70	0.960	28.50	14.51	15.68	15.05	**18.81**
2	50.00	85.00	0.388	2324.79	1.70	0.960	28.00	14.26	15.40	14.79	**18.48**
3	50.00	85.00	0.392	2348.75	1.70	0.960	26.70	13.60	14.69	14.10	**17.62**

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Attur Lake Double Road, Kempanahalli Road

SILICON CONSULTING ENGINEERS

Asst. Executive Engineer
Project ... ion
Yelahan... ne
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